Facilitator’s Guide for IMAI TB Infection Control Training at Health Facilities

INTEGRATED MANAGEMENT OF ADOLESCENT AND ADULT ILLNESS (IMAI)
This training manual is part of a training course for health workers (clinical officers and nurses) at first-level health facilities (health centres or district hospital outpatient clinics).

**These materials are based on input from:**

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- WHO’s Stop TB Department: Rose Pray, Haileyesus Getahun;
- Centres for Disease Control and Prevention (CDC) Global AIDS Program, Atlanta, USA: Bess Miller, Naomi Bock, and others;
- The IMAI Project, Brigham and Women's Hospital, Harvard University, Boston, USA; KJ Seung,
- Kimberly Zeller, Brown University Medical School, Providence, USA;
- ACT International, Atlanta, USA.

The authors also gratefully acknowledge significant input from the CDC Global AIDS Program's Training Course on Diagnostic HIV Testing and Counselling in TB Programs.

Prior to use, please ask for the most up-to-date version of this course. We also ask that you provide feedback. We will continue to improve both the IMAI guidelines and these training materials and add additional training aids such as video materials and further photo booklet case exercises. Work is also ongoing to translate IMAI materials into several languages.

Prior to implementing this course, please check the [www.who.int/hiv/capacity](http://www.who.int/hiv/capacity) website (register on the IMAI Sharepoint website to obtain the most current drafts), or e-mail [imaimail@who.int](mailto:imaimail@who.int), or contact the IMAI team at WHO’s Department of HIV/AIDS for updates and other implementation support.
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Chapter 1: Course Introduction

Learning objectives

By the end of this session you will be able to:

- Know fellow participants and facilitators
- Recognize the role of the facilitator/s
- Recognize administrative arrangements
- Describe the learning objectives of this module
- Recognize the context of this training and how module I is structured

The facilitator will introduce you to your fellow participants, course facilitators and course organizers. The course organizers will also brief you on any administrative arrangements related to this training.

TB and HIV are leading public health problems in several countries. TB is a common cause of morbidity and death in HIV-infected persons. Persons with undiagnosed, untreated and potentially infectious TB are often seen in HIV care settings.

This module has been developed for health workers and other staff are posted at health centres or district hospital outpatient clinics.

The course is designed as in-service training with the overall objectives of:

- Providing evidence-based training in TB infection control at health facilities

This module includes two chapters:

Chapter 1: Course introduction

Chapter 2: How to avoid spreading TB in primary health facilities

This one-day training course can be given as a continuation to the IMAI TB/HIV co-management module 1, or as stand-alone course.

What does this module cover?

The module will take you through:

- How TB is spread
- Stage at which TB disease is infectious
- TB infection control plan
- Preventing TB transmission through good patient management
- Environmental control measures
- Recommendations for screening health workers for TB and HIV
**Training methodology:**

This course adopts a participatory and interactive approach. Participants will work through the sections with the aid of facilitators and will learn through a combination of individual reading sessions, group discussions, facilitator-led drills, short answer exercises and case studies. The course is designed to maximize involvement of all participants.

*Note on training methodology:*

- Case studies should be done individually (with feedback from the facilitator).
- Drills are done in group sessions.

**Target audience for this training:**

The target audiences of this training are:

- Health workers and other staff at facility level. This training material can be used as stand also course to train any staff at the facility, including administration staff, on TB infection control.

**Training Materials for participants:**

Each participant should receive the:

- *Participant's Manual for IMAI TB Infection Control Training at Health Facilities*
- Country adapted *TB care with TB/HIV co-management* guideline module
- Country adapted *IMAI/IMCI Chronic HIV Care with ARV Therapy and Prevention* guideline module
- Country adapted *IMAI Acute Care* guideline module
### Chapter 2: How to avoid spreading TB

#### Duration:
70 minutes

#### Materials:
Flipchart, marker

#### Preparation:

#### Purpose: To build understanding about how to prevent the transmission of TB in a health-care setting

#### Learning objectives:
At the end of this session participants will be able to:
- Explain how TB can spread in the health-care setting
- Understand the reason for health facility TB control plan
- Prevent TB transmission in health-care setting through good patient management

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<tr>
<th>Content</th>
<th>Methods</th>
<th>Duration</th>
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</thead>
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<tr>
<td>How TB is spread</td>
<td>Reading and discussion</td>
<td>10 min</td>
</tr>
<tr>
<td>When is TB disease infectious</td>
<td></td>
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<tr>
<td>TB infection control in health-care settings</td>
<td>Reading and discussion</td>
<td>45 min</td>
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<tr>
<td>Exercises</td>
<td>Reading and discussion</td>
<td>15 min</td>
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1. Read the learning objectives aloud to the participants.
2. Ask the group "what is the cause of TB and how does TB spread?" and list on flipchart. Explain that in order for TB to spread it must come from another person with TB disease. TB is infectious if it occurs in the larynx or lungs.
3. Ask a volunteer to read section 2.2. Point out that all those suspected of having TB should be considered infectious until a diagnostic evaluation is completed.
4. Ask the group how TB can spread in health-care settings. Write the list on the flipchart.
5. Ask the group to read the first paragraph of section 2.3 individually. Point out that TB patients who are not yet on treatment are often seen at an outpatient department where HIV care is also provided. The health facility can prevent TB transmission in such settings.
6. Explain that health workers and other staff are also at risk of TB infection because of frequent exposure to patients with infectious TB. Emphasize and review the three bullet points to prevent the transmission of TB in the health facility.
7. Ask the group to read section 2.4.
8. Discuss exercise 2-1.
9. Ask a volunteer to read section 9.5 to the end. Point out that health workers can improve ventilation within the existing health facility.
10. Discuss exercise 2-2.
1. Which of the following can be used/advised for cough hygiene
   a. Cloth or paper mask (surgical mask)
   b. Tissue to cover mouth and nose while coughing
   c. Covering mouth with old cloth
   d. Covering mouth and nose with patient’s upper sleeve
   e. Covering mouth and nose with patient’s hand.

2. Rate each case according to likelihood of transmitting TB, from most likely to transmit TB (3 = highest risk), to least likely (1 = lowest risk).

   a) 3 Post-partum woman bringing child for immunization, coughing since delivery due to undiagnosed TB
   b) 3 A person suspected of having TB
   c) 1 TB patient on treatment for three months using DOT
   d) 1 Three-year-old child with newly diagnosed pulmonary TB
   e) 1 Patient with TB meningitis (no other site)
   f) 1 Patient with sputum smear negative pulmonary TB
   g) 1 Patient with pneumonia returns for sputum results; sputum was positive
   h) 3 Unknown patient coughing for three weeks, first visit, not covering mouth.
Exercise 2-2: Short answers

(1) in the following drawings, circle what is good practise; put a box around what is a problem

(2) Rate each according to the risk of TB transmission (3 = the worst risk; 1 = the least risk).
1. A room with an open window, open door, and a window fan
2. Enclosed room with an open window, but door is kept shut; no window fan
3. Enclosed room with no window fan or open window
3. Enclosed room with window, door and window fan, but the window and door are shut during clinic hours.
(3) Draw lines to categorize the interventions.

<table>
<thead>
<tr>
<th>Patient management improvement to reduce risk of transmission</th>
<th>Open window</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical ventilation</td>
<td>Open door</td>
</tr>
<tr>
<td></td>
<td>Window fan</td>
</tr>
<tr>
<td>Natural ventilation</td>
<td>Move people suspected of having TB to front of line</td>
</tr>
<tr>
<td></td>
<td>Speed up diagnosis of TB</td>
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<tr>
<td></td>
<td>Make sure patients adhere to TB treatment</td>
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<tr>
<td></td>
<td>Waiting room outside without walls</td>
</tr>
<tr>
<td></td>
<td>Provide tissues for coughing patients</td>
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</tbody>
</table>

4) Mark each statement as True or False and explain why.

**T**  **F** Coughing patients should be sent to the toilet to produce sputum samples.

**T**  **F** A face mask (surgical type) worn by a coughing patient with TB can help prevent TB transmission.

**T**  **F** A face mask (surgical type) worn by a health worker is a good way to prevent TB transmission.

**T**  **F** Never send coughing patients outside to produce a TB sputum sample.

**T**  **F** There is only risk of TB transmission in adult medical and TB clinics.
Clinical Sessions: TB Infection prevention plan

Arrange a 3 hour clinical session for the group before the actual day of the session. Inform the facility team of this visit as early as possible, in order to provide adequate time for preparation. It is preferable to organize the visit in the morning, when in most setups the patient load is higher.

Assess the facility focusing on: 1) How patients' with cough, suspected TB patients, and patients with TB disease are identified and triaged in the facility, 2) Environmental control measures, 3) how TB and HIV services are provided for health workers. Focus the visit to the outpatient clinic; HIV care/ART clinic, TB clinic, VCT service, and laboratory services, where TB patients and PLHIV tend to attend same service.

Ask participants to write recommendations/plan for the facility in a group of 4-5. Discuss participants findings and plan in class following plenary presentation by each group.